

REMARKS

By the present amendment, claim 1 is pending in the application.

Support For Claim Amendment

In amended independent claim 1, support for one or more of Ti, Nb, V, Cu, Cr, and B in the amounts recited may be found in the specification, e.g., at page 8, lines 3 to 6.

The specification at page 8, line 5 discloses “Ni: 1% or less”. Therefore, the specification discloses 0% Ni in the steel sheet of the present invention.

Restriction Requirement

Applicants hereby affirm the telephone election of the claims of Group I, i.e., claims 1 and 6 directed to steel sheet product, for further prosecution in this application.

By the present amendment, non-elected, withdrawn method claims 2 to 5 and 7 have been canceled without prejudice to the filing of a divisional patent application directed to the subject matter of canceled, non-elected, withdrawn method claims 2 to 5 and 7.

§112, ¶2

Claim 1 was rejected under 35 U.S.C. §112, second paragraph, as being indefinite because the composition ranges did not recite the unit mass percent.

In response to this rejection, claim 1 has been amended by the present amendment to recite the unit “mass %”.

In view of the present amendment, it is respectfully requested that the rejection under 35 U.S.C. §112, second paragraph, be withdrawn.

Double Patenting

Claims 1 and 6 were **provisionally** rejected on the grounds of non-statutory obviousness type double patenting as being unpatentable over claims 1 to 7 of co-pending Application No. 10/560,989 in view of EP 1 160 346.

Claims 1 and 6 were **provisionally** rejected on the grounds of non-statutory obviousness type double patenting as being unpatentable over claims 1 to 10 of co-pending Application No. 10/558,579 in view of EP 1 160 346.

Claims 1 and 6 were **provisionally** rejected on the grounds of non-statutory obviousness type double patenting as being unpatentable over claims 1 to 3 of co-pending Application No. 10/591,919 in view of EP 1 160 346.

Since there are **provisionally** obviousness type double patenting rejections, no further action needs to be taken at this time.

Appropriate action will be taken at the time conflicting claims are patented.

§103

Claims 1 and 6 were rejected under 35 U.S.C. §103(a) as being unpatentable over EP 1 160 346 to Takada et al.

This rejection, as applied to the amended claims, is respectfully traversed.

Patentability

EP 1 160 346 (the “‘346 patent”)

The technology disclosed in the ‘346 patent relates to a high strength galvanized steel plate excellent in adhesion of plated metal and formability in press working and high strength alloy galvanized steel plate used in a member of automobiles, construction, and electric devices, where the steel sheet contains C: 0.05 - 0.2%, Si: 0.2 - 2.0%, Mn: 0.2 - 2.5%, Al: 0.01 - 1.5%, Ni: 0.2 - 5.0%, P < 0.03%, S < 0.02%, and the relationship between Si and Al being $0.4\% \leq Si + 0.8 Al \% \leq 2.0\%$, and the volume percentage of the retained austenite is 2 - 20%. The steel sheet surface has the relationship between Ni and Si, Al in 0.5 μm of the steel sheet surface layer wherein Ni (%) $\geq \frac{1}{4} Si + \frac{1}{3} Al (%)$ and has a Zn plating layer comprising Al $\leq 1\%$, with the remainder Zn.

In the '346 patent, Ni is an indispensable element both in the steel sheet and in the surface layer. Ni is more resistant to oxidation than Fe, an austenite-stabilizing element and improves strength and plating adhesion which can be achieved where the Ni concentration in 0.5 μm of the steel sheet surface layer, together with Si and Al, is as defined above. Further, regarding Mo, Mo is added in the '346 patent as an optional element to increase strength.

On the other hand, the present invention contains Mo as an indispensable element and has no Ni addition. The Mo addition in the present invention is to promote ferrite formation and to obtain a good balance of strength and ductility. The application specification, at page 7, lines 12 to 16 discloses that "Mo forms pearlite and reduces the residual austenite rate if less than 0.05%. Excessive Mo addition sometimes causes a drop in the ductility and deterioration of the chemical convertability, so 0.35% was made the upper limit". Regarding Ni, the present invention does not add Ni (as an impurity amount) because Ni acts quite opposite to Mo.

Therefore, the present invention is different type of steel compared with the steel of the '346 patent.

It is therefore submitted that amended claim 1 is patentable over the '346 patent.

CONCLUSION

It is submitted that in view of the present amendment and the forgoing remarks, the application is now in condition for allowance. It is therefore respectfully requested that the application, as amended, be allowed and passed for issue.

Respectfully submitted,

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